Branching Out: The Role of Mangroves in Coastal Louisiana's Fisheries

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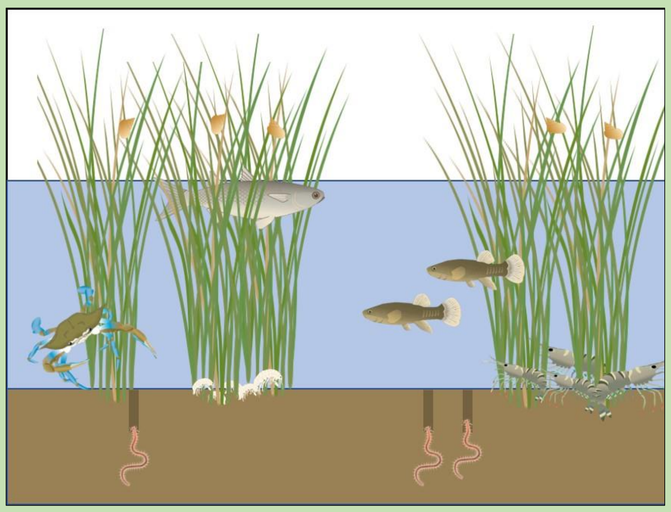
1. Introduction

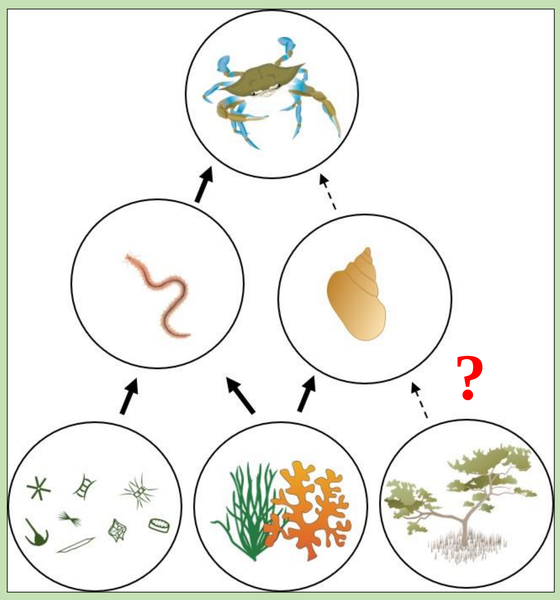
- Winter warming and drought conditions are projected to influence the spread of black mangrove trees (*Avicennia germinans*) into coastal Louisiana salt marshes that are traditionally dominated by grasses (*Spartina alterniflora*).
- It is unknown how this transition will affect aquatic animals that rely on the salt marsh, which is an essential nursery habitat for commercially and recreationally important fish, shrimp and crabs.

2. Research Questions



i. Do aquatic animal communities and abundance change with habitat type from salt marsh to mangrove?

ii. Are black mangrove leaves incorporated into food webs similar to salt marsh grass?

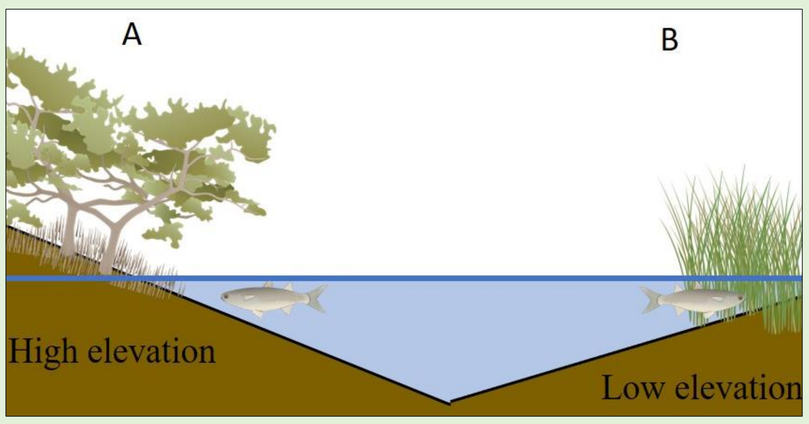


3. Research Methods & Findings

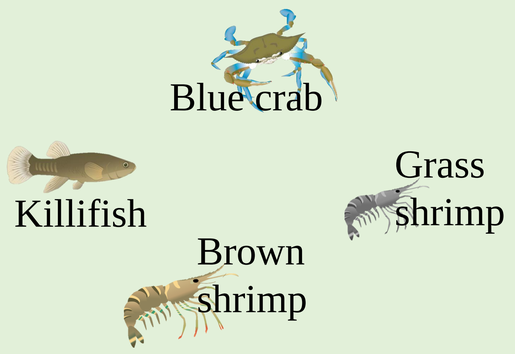
Salt marsh, mixed, and mangrove habitats were sampled near Grand Isle and Port Fourchon, LA.
Animals living on the edge and in the habitat were collected during high tide

i. Community and abundance can change, but not only by habitat type. Elevation of the habitat is an important factor.

High elevation can restrict habitat use for aquatic animals. For example, habitat B is under water, where A is not accessible



ii. Animal muscle tissue was analyzed to determine if their food webs include black mangrove leaves.



Of the five animals studied, only marsh periwinkle snails incorporated mangroves.

4. Acknowledgements

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